



MONTANA AERONAUTICS COMMISSION

Vol. 23—No. 7

July, 1972

ATTENTION MONTANA FBO'S & PILOTS

Dear FBO's & Pilots;

In past News Letters we have discussed our plans regarding a review and study of all aviation activities throughout the state of Montana.

We have recently received Federal approval, through the FAA of our proposal covering this study and its goals and objectives. Negotiations have been completed with the engineering firms of Knoerle, Bender, Stone and Associates, Inc. and Airways Engineering Corporation to conduct this review and study for us. As Consultants on the MSADP, Montana State Airport Development Plan, they will work very closely with your Aeronautics Commission. To assure close coordination the Consultants have established an office in Helena.

Your airport and particularly the aviation activity at your facility are very important to us and the study since they make a significant contribution to the state economy. It is for this reason that we are requesting that you make every effort to have the non-based general aviation aircraft operators fill out the enclosed questionnaires and return them to you for transmittal to MAC.

As indicated on the questionnaire the seven days beginning at mid-

night on Sunday, September 10, 1972 have been chosen as the survey period for obtaining certain pertinent information from the operator of each non-based aircraft departing your airport during that period.

* * * *

The above letter and accompanying questionnaires will be mailed out the week of August 28, 1972.

The questionnaires will serve as a sample of "Origination and Destination" operations for general aviation activities within the state.

Since the Montana State Airport Development Plan will determine the state's airport system for the next two decades, this information is vital.

We would appreciate your cooperation in supplying us with this information.

MRS. BUTCHER MONTANA'S 1972 FLYING FARM WOMAN

Montana's Flying Farm Woman of the Year, who was also the state's participant for the title of International Flying Farm Woman of the Year, is Mrs. Louise E. Butcher.

Mrs. Butcher has been a private pilot since 1956, a member of a women's flying organization — the 99'S — since 1957, and was International Flying Farmer Queen in 1957.

FLYING FARMERS



1972-73 Officers of Montana Flying Farmers, left to right: Wayne Kreuger, Director, Reedpoint; James Hanson, Director, Melville; Kay Compton, Secretary-Treasurer & Newsletter Editor, Whitehall; Arnold Sorenson, Kremlin; Janet Sorenson, Queen, Kremlin; Leonard Sorenson, Vice President, Bozeman; Virgil Compton, President, Whitehall. The officers were elected at the Annual Flying Farmer Convention held in Helena in May.



President Virgil Compton and wife Kay on the way to the International Flying Farmer Convention in Philadelphia in August in their Cessna 182.

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City/County Airport
of the**

**MONTANA AERONAUTICS
COMMISSION**

**Phone 449-2506
Box 1698**

Helena, Montana 59601

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Edited by: R. Bowsher



**FEDERAL AVIATION
ADMINISTRATION
ITINERARY LISTINGS**

Airport	Sept.	Oct.
Bozeman	18
Butte	14
Culbertson	4
Glasgow	6
Glendive	21
Great Falls	7
Havre	4
Kalispell
Lewistown	18
Miles City	20
Missoula	21

NOTE: Provisions have been made to give private, commercial and flight examinations **ON AN APPOINTMENT BASIS ONLY** at the following FAA Flight Service Stations.

Bozeman	Livingston
Butte	Lewistown
Cut Bank	Miles City
Dillon	Missoula
Great Falls	

NOTE: GADO #1 in Billings will no longer be open on Saturdays.

Jets make less air pollution than the propeller planes they replaced. (Jet engines produce less than half as much pollution by weight as piston engines.)

Director's Column



One of the more pleasant features of being with the Aeronautics Commission is being able to travel around the state and visit with aviation people and with people who have an interest in aviation but are not always aware of it. Recently I had a very pleasant visit with friends in the Shelby area who know about aviation and who work hard to communicate the value and the need of aviation to their friends and neighbors who we all know have a stake and interest in aviation but are not always aware of it. I am referring to my visit to the Shelby Hangar when they held their regular meeting in July and we discussed many things, including Airport Authority, Aircraft Taxation, funds from aircraft taxation that should be put into airport development, and many other matters of mutual interest. This was not only a very interesting meeting but it was a good meeting for me to attend in preparation for another meeting that I attended in August.

The second meeting was with people who do not deal with aviation and are not as conscious of its benefits and uses and of the impact it has upon them and they have on the aviation community in their own areas. I am referring to the Montana County Attorney's Convention where I was kindly invited to speak on various subjects, including Airport Authority, taxation and other subjects. One of these other subjects, and one I consider of major importance, was the need for revenue for good airports so that they in turn could be a good neighbor and good service to the community. The attorneys seemed to appreciate the fact that they were not as aware of some of the information as they should

have been and appreciated hearing from people in aviation. As you readers are aware, most airport boards have the County Attorney as a legal advisor, but very often his work is limited to the law as it applies to the airport. It was my intention to let him know that his active interest and active support was wanted in all phases of the airport and its uses.

We here at the Commission are anxious to speak to groups throughout the state about the activities of the Commission. We want to tell of our goals and efforts and would appreciate hearing from anyone who would like to hear such a presentation. As we prepare our proposed new legislation, we are most anxious to talk to those groups who are not in direct contact with aviation to tell our side of the story and let them know what aviation can do for the community, not only on the large air carrier airports but on the small general aviation airports that are in the majority here in Montana.

I would like to add here that I have also been invited to speak at the League of Cities and Towns during their annual convention at Lewistown in September and look forward to take our message to the Mayors, City Council and other officials that attend this important meeting.

CONGRATULATIONS



**FAA CERTIFICATES
ISSUED RECENTLY TO
MONTANA PILOTS**

STUDENT

Scott Previnger—Havre
Henry Gunion—Marion
Conrad Hill—Laurel

PRIVATE

Bryon Conrad—Kennear, Wyoming
Anthony Hawks—Shaunavon, Sask.
Conrad Hill—Laurel
Gary Anderson—Whitewater

Harold Sturdevant—Stevensville
 James Herbaugh—Miles City
 Patrick Whelan—Two Dot
 Leonard Maki—Belt
 Clifford Larson—Butte
 Hugh Dresser—Butte
 Jerry Cross—Hardin
 Robert Clift—Lisdale, Sask.
 Dennis Barber—Denton
 Jack Miller—Harlowton
 Wayne Lechner—Billings
 David Tremp—Havre
 Michael Martin—Portland, Oregon
 James McGown—Malmstrom
 Waren Hein—Helena
 Arnold Olson—Kalispell
 Larry Sullivan—Missoula
 Jack Smallwood—Helena
 George Olsen—Great Falls
 Leonard Seimens—Ft. Macleod, Alta.
 David Gregory—Glasgow
 Charles Thompson—Devine, Texas
 Duane Strouf—Hobson
 Earl Andrus—Missoula
 Robert Brown—Circle
 Kevin Daniels—Missoula
 Arthur Emery—Philipsburg
 James Thomas—Missoula
 Richard Keep—Stevensville
 Vance Vickers—Lolo
 Curtis Feller—Chase, Kansas
 Dale Falk—Bozeman
 Eugene Norby—Elk City, N. Dakota
 Ronald Meeks—Stevensville
 Ralph Pebbles—Missoula
 Larry Bentsen—Plentywood
 John Sand—Tacoma, Wash.
 Michael Evans—Missoula
 Gary Morris—Great Falls
 Thomas Wiggin—Kalispell
 Merton Derr—Oxbow, Sask.
 Douglas Jones—Chamberlain, S. D.
 John Devous—Bozeman
 Douglas Averill—Bigfork
 Elbert Sturgis—Darby
 Alan Williams—Missoula
 Richard Green—Malmstrom
 Larry Brandvold—Choteau
 Robert Airth—Dewinton, Alta.
 Willis Bailey—Stanford
 Donald Newton—Lewistown
 Gerald Lassenden—Helena

COMMERCIAL

John Minor (ASEL)—Missoula
 Terry Lobdell (ASEL)—Richey
 Charles Sylvester (AMEL)—
 Great Falls
 Fred Frye—Glasgow

Vincent Doran Jr. (AMEL)—Anchorage, Alaska
 Ernest Bargmeyer (ASEL)—Missoula
 Lt. Col. Donald Hutchison (ASEL)—
 Great Falls
 Donald Hankel (ASEL)—Missoula
 Hugh McLaughlin (ASEL)—Kalispell
 Melvin Willey (AMEL)—Great Falls
 Dennis Shalleberger (ASEL)—Santa Ana, Calif.
 Dirk Ibsen (ASEL)—Missoula
 Lawrence Mellor (ASEL)—**Browning**
 Donnell Mills (CRH)—Power
 David Dakin (AMEL)—Cranbrook, B.C.
 Barbara Habedank (ASEL)—Clinton
 Vernon Paull (ASEL)—Missoula
 Jack Nordberg (ASEL)—Calgary
 Dean Borchers (ASEL)—Great Falls
 Michael Tessoro (ASEL)—Missoula
 Loren Nichols (ASEL)—Frazer
 James Lott (ASEL)—Missoula
 Wilson Smith (ASEL)—Missoula
 Jerry O'Leary (AMEL)—Lander, Wyo.
 Burton Chandler—Billings
 Willard Rimby (AMEL)—Lewistown
 William Coudie—Coronach, Sask.
 Clifton Armstrong—Edmonton, Alta.
 Lawrence Stalnaker (ASEL)—Kalispell
 Jon A. Svendsen (GLIDER)—Kalispell
 Leslie Preston—Great Falls
 Kenneth Cebulski (ASEL)—Malta

INSTRUMENT RATING

Gary Sande—Geraldine
 John Felten—Lewistown
 Lary Moser—Hardin
 Lorange Tucker—Billings
 George Rosenfeld—Billings
 Kenneth Wendland—Billings
 James Howell—Sheridan, Wyo.
 Harold Smith—Helena
 Tommy Shepherd—Kalispell
 Henry Galpin—New Haven, Conn.
 Blair Hamer—Helena
 Clyde Fredrickson—Missoula

ATR

Charles Komberec—Missoula

FLIGHT INSTRUCTOR

Dennis Skovgaard—Billings
 (Airplane)
 Delbert Bloom—Lewistown (Glider)
 Joe Howell—Billings (Instrument)
 John Felten—Lewistown (Airplane)
 John Saxman—Missoula (Airplane)
 Carl Heishman—Great Falls
 (Airplanes)
 Dixie Jewett—**Ketchikan**, Alaska
 (Instrument)

Carl Hartwig—Dillon (Airplanes)
 Raymond Bonnell—Seeley Lake
 James Cooney—Missoula (Airplanes)
 Howard Alexander—Great Falls
 (Airplanes)
 Stanely Read—Missoula (Airplanes)
 Michael Biggerstaff—Wolf Creek
 (Instrument)
 Dennis Hensley—Havre (Airplanes)
 Roger Walker—Henderson, Texas
 (Airplanes)
 Norman Sonju—Shelby
 Erik Ogren—Missoula (Airplanes)
 Harold Graf—Fairfield (Airplanes)
 Russell Beree—Missoula (Airplanes)
 Richard Bradford—Placerville
 (Instrument)

GROUND INSTRUCTOR

Gerald Casman—Helena (Basic)
 Vernon Paull—Missoula (Advanced)
 Charles Koehler—Great Falls
 (Advanced)
 Dixie Jewett—Ketchikan, Alaska
 (Basic)

TYPE RATINGS

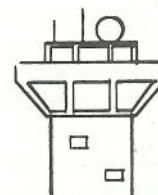
Silorsky SK-58
 Douglas Knapton—Helena

AIRFRAME MECHANIC

James Hall—Lewistown
 James Marks—St. Ignatius
 Gary Herem—Red Lodge
 Paul Miller—Red Lodge
 James Erickson—Billings
 James Shipstead—Scobey

POWERPLANT MECHANIC

William Pace—Helena
 James Brown—Great Falls
 Steve Jones—Bozeman
 Edward Snider—Hogeland
 Paul Buzalsky—Billings
 Arnold Sorenson—Kremlin
 Milas Hill—White Sulphur Springs

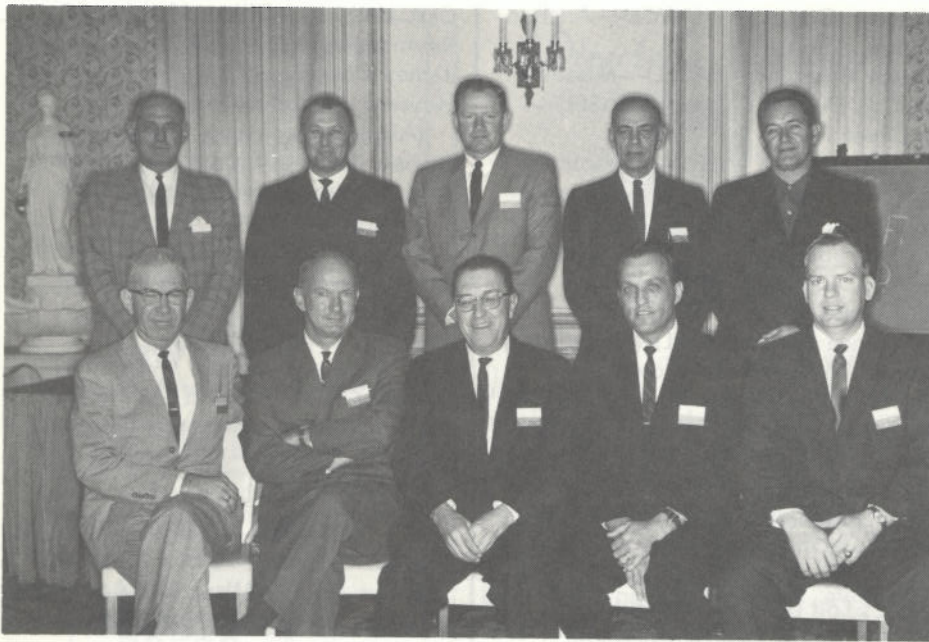


TOWER

OPERATIONS

June, 1972

	Total Operations	Instrument Operations
Great Falls	8,029	1,127
Missoula	8,678	183
Billings	7,175	1,222
Helena	2,999	244



1965—With, seated left to right: James Ramsey, Michigan; E. C. Marsh, FAA; Robert Nemmers, Iowa; Gene Steuart, Kansas. Standing: Tom Jordon, Wisconsin; L. E. McCabe, Minnesota; James Sandstedt, Nebraska; L. V. Hanson, South Dakota; J. E. Wenzel, Illinois at FAA/State Aviation Director's Conference in Kansas City, Missouri.



1966—With Col. Reet P. Smith at an operations briefing at Malmstrom AFB, Great Falls.



1964—With left to right: Jack Wilson, MAC; Bill Wyman, formerly with MAC; Col. Springer, USAF; Chet Moulton, former Idaho Aeronautics Director; Roger Richie and Ralph McGinnis, Oregon Aeronautics at Search & Rescue Coordination meeting at Hamilton AFB, California.



1964—With MAC staff: Jack Wilson and Marge Davis.

CHARLES A. LYNCH

1913 - - 1972

By William E. Hunt
Director

Montana Aeronautics Commission

Charles A. Lynch was appointed to the Montana Aeronautics Commission in July, 1951, and served in that capacity for more than ten years until he was appointed Director, to succeed Frank Wiley in November of 1961. He thus became the second Director in the history of the Commission and actively headed the staff

until September of 1969 when he was forced to retire because of injuries received in an airplane accident.

But even though he was no longer active in aviation following the accident, Chuck's influence through his work continues. His years as Director of the Aeronautics Commission are marked by airport construction and development from the proceeds of the gas tax from the Glasgow Air Force Base which he did so much to keep and increase. He was the au-

thor of two pamphlets that are still requested. The subject of one is "Professionalism in the Commercial Flight School" and the subject of the other one is "The Businesslike Approach to Small Shop Work Orders." Airports were established for those counties that did not have them in all but two counties in the entire state, to help link together the State of Montana in a time of dwindling surface transportation. No program is more needed or popular than the Flight Instructor Refresher Course



1963—With, left to right, Lon Garrison, Claude Duncan, Senator Mike Mansfield at ground breaking ceremonies at West Yellowstone Airport.



1962—With, seated, left to right: Harry Elser, National Weather Service; Bernard Geier, FAA; Sam Lewis, FAA; Art Jacobson, National Weather Service. Standing: Dick Munro, formerly MAC; Lee Ward, FAA; Joe Fallen, FAA; Neil Fox, FAA at Flight Instructor Refresher Course, Great Falls.



1963—With Russ Lukens and former FAA Administrator Najeeb Halaby at opening of Pole Bridge Airport.



1963—With former Governor Tim Babcock, recipient Bob Huston, FAA Chief Lee Mills at 1963 FAA Mechanic Safety Award Presentation.

that he helped to pioneer and is now copied by many other states in the United States. Space does not permit listing all of his accomplishments for the State of Montana as Director.

On the national scene, Chuck served as President of the National Association of State Aviation Officials, and also as its Treasurer. As President and as Treasurer, he was influential for many years in setting the course of the national association and its relationship with the federal government and aviation in general.

The imprint of Charles Lynch upon aviation is broad, deep and permanent. As a Commissioner, and later as a Director, his association spanned nearly twenty of the twenty-seven years of the Aeronautics Commission's existence. Chuck served as an officer for NASAO for over five years. He brought credit and honor to Montana and — the Commission through his service to all of aviation, to his state, and to the nation by his energy, innovations, leadership and his eagerness to serve

and to educate. The evidence of all of these things is to be found in his writings and in the courses and programs still being offered and requested at the Aeronautics Commission.

Charles Lynch was born in Devon, Montana, and raised in Shelby. He lived in Billings where he and his brothers, Tom and John, operated the Lynch Flying Service, one of the outstanding flying services in the northwest, and still operated by the surviving brothers and their children.

SAFE APPROACH



By Jack Wilson
Assistant Director
Safety and Compliance

Well, it appears that summer has finally arrived and with it the normal hazards associated with summer flying in Montana. Anyone who has flown very much in the state is aware of the constant formation and dissipation of thunderstorms throughout the entire state during any day, usually in the afternoon and evening. These thunderstorms are usually visible from great distances and can be circumnavigated. If they cannot, then the pilot can make an 180 or land at the nearest airfield and wait it out.

These thunderstorms and the other weather phenomena are usually visible and can very easily be handled with a little common sense. Therefore, let's discuss a few items that are not visible which can be hazardous if ignored.

One of the most hazardous conditions for summer flying in Montana is the high elevation of some of the fields in comparison to sea level and some of the high temperatures which can be encountered at some of the high airfields. We are, of course, discussing density altitude. I do not propose to give a course in density altitude, but I do suggest that the pilots make themselves aware of what the density altitude of an airport is that they are approaching or taking off from, and I would like to call your attention to three of the higher elevation airfields in Montana and give you some comparisons.

At West Yellowstone, Montana on an 80 degree F. day the density altitude can and normally would be above 9,000 feet. Your take off distance would be 2 and $\frac{1}{2}$ times your sea level take off distance and you

would have 40% rate of climb of sea level rate of climb.

At Butte, at 80 degrees F. your pressure altitude would very likely be above 8,000 feet and again your take off distance would be over twice the take off distance of sea level and you would have a little over $\frac{1}{2}$ the rate of climb that you would have at sea level.

By the same token, at Dillon on an 80 degree F. day your density altitude would be approaching 8,000 feet and again it would take you 2 and $\frac{1}{2}$ times the normal take off distance at sea level and you would have just a little over 50% of your normal rate of climb for sea level. The pilot should pay particular attention to the difference between his take off roll and his distance to clear a 50 foot obstacle. I believe that if he would compare these with sea level performance he would get a very good idea of what air density does when taking off in Montana in the mountains.

What can occur if a pilot is not very careful in checking all factors, is that he can attempt a take off at very near or maybe above the service ceiling of his particular aircraft. There are various charts and computers which will afford a pilot the opportunity and the means of figuring his aircraft performance into and out of high density altitude airfields. I would suggest that a pilot become completely familiar with his aircraft performance charts in his pilot handbook for his particular aircraft, and that he use them at all times when flying into and out of the higher elevation airfields in the state.

He further should keep in mind that all of his performance data listed in his pilots handbook is **for sea level performance on a standard day, on a new aircraft with a new engine, and make allowances for the fact that his aircraft is getting older and engine performance is not what it was when it was new.**

I think it would be appropriate at this time to go into a few of the do's and don't's which have been accumulated from a consensus of quite a number of experienced moun-

tain pilots who fly the mountains almost daily in Montana and Idaho.

First and most important is that no pilot should consider flying the mountains or trying to land in any of the short fields in any of the back country unless he has at least 150 hours and is proficient in slow flight. Slow flight being in the area of 10 to 15 miles above stall speed and being able to turn and maneuver the aircraft at will.

Do not under any circumstances take an airplane into this type of terrain conditions unless you know your airplane thoroughly and know that it will take off and land in the minimum distances required. Be very familiar with the airfield that you are going to operate out of, and if necessary, check with an experienced mountain pilot who is familiar with the altitude, length and particular local conditions around the airfield and whether or not it is a one-way field.

Obviously, you should check the weather and stay out of bad weather. Making trips in the early morning hours is usually the best rule because the winds begin to get bad around 10 o'clock and grow steadily worse until about 3:30 or 4 and then it will probably improve until dark. In any case, it is not the wisest idea to fly in the mountains if the wind is over 25 miles per hour.

There are various pamphlets, books and charts which will furnish you information for crossing mountainous terrain or preparing to land in any of the mountain strips, so I will not go into anymore of this information.

However, I would cover one item of safety which I feel is one of the ones most ignored, and that is flying over the airfield on which you are going to land at a safe altitude and checking to see if there are any aircraft on the field. If there are any, do they have a prop turning and does it look like they are preparing to depart? If there is an aircraft preparing to depart and it is a one way field, obviously the plane is going

to take off directly into any landing aircraft.

Each pilot should establish the practice of calling in the blind on 122.8 MHz whenever he is approaching or departing an airfield, not necessarily a mountain strip but any airstrip where there is no control facility to advise any aircraft that he is in the area or what his intentions are. Pilots cannot maintain constant visual contact over the runway in most of the back country strips and if they will establish the practice of calling on 122.8 they may be able to assure much safer approach and departure from some of these isolated airfields.

Before you fly into the remote areas or into any short field landings it would behoove any pilot to practice short field landings with power, upwind, downwind and crosswind to assure himself that he can set his aircraft down on a 50 foot spot on every approach. If the pilot is unable to do this then he should not attempt landing at any of the short strips until he becomes proficient enough to do so.

These are only a few suggestions for safe use of high altitude, short field airfields and in any case is not nearly the total information a pilot should have to fly in the mountains or land at these strips. There are various pamphlets, maps, charts, etc. which will furnish this information published by the Federal Aviation Administration and the various state aeronautics commissions. If you desire further information, please write to these organizations for it.

FAA INSPECTOR'S CORNER



By Lauren D. Basham
Accident Prevention Specialist
RM-GADO-5, Helena

"WHERE SAFETY LIES"

In a recent accident study, the

National Transportation Safety Board cited pilot error and poor judgment as the greatest single cause of aircraft accidents. While this may be true, it fails to identify the **root cause**.

The fact is that accidents happen all too often when pilots are confronted with situations in which they have little or no experience or in which they have insufficient skill to extricate themselves. We tend to be indulgent of human frailties or human error in many such cases because of a mistaken belief that little, if anything, can be done.

In this respect, we need to revise our thinking for **accidents do not just happen**—they are the consequence of one or more infinite actions contrary to proven practice. We must, therefore, assume that the behavior of every pilot is a variable constantly influenced within certain limits by environmental factors.

In the training situation, proper supervision or lack of it may be a potent factor contributing to the tendency toward human error.

A specific defect in elementary flying technique, conspicuous during training, may be obscured by adaptation and learning and re-appear some time after certification to influence the incident and/or accident tendency. There is all the more reason then for flight instructors, pilot examiners and FAA Inspectors to look closely at marginal performance and view all errors critically.

A positive approach would be to examine the **error** in **procedure** or **technique** in terms of the following:

1. Error induced by design or approved but incorrect operating procedures.

An example may be confusion in choosing the proper lever on an engine shut down in multi-engine equipment. Where several different mutually antagonistic techniques are learned during the training process, (that is to say performance of one tends to inhibit or confuse the performance of another) adequate response is blocked under emotional stress. The underlying problem of conflicting habits is "Poor Coordination" which accounts for an alarm-

ing percentage of pilot error accidents.

2. Error caused by lack of knowledge or ignorance of good operating practices.

An example may be a pilot flying a light aircraft in atmospheric conditions conducive to carburetor icing. This pilot may completely ignore the warnings of decreasing RPM or manifold pressure and other undeniable indications of the onset of carburetor icing until engine stoppage occurs.

3. Error due to deliberate acts of omission or commission contrary to recognized good operating practice.

An example may be failure to use a checklist, the use of obsolete charts, pre-occupation or checkitis.

4. Error caused by environment.

An example may be an airport located on unsuitable terrain or a hazard such as improper snow removal.

5. Error caused by psychological or physiological reasons.

Vertigo may be an example of both.

These five areas can overlap and operate in combination. For example, an accident resulting from a psychological factor may have its origin in ignorance (such as loss of control during an attempted VFR night flight).

Any incident or accident which embodies the error factor should be studied in depth in terms of:

1. The conditions under which the error occurred.
2. The result of the error.
3. The personnel involved.
4. The discernable factors which caused the error.

It is within this nebulous area that safety truly lies. The insidious rise of the human error factor in the general aviation accident structure makes the need for such a positive approach more critical than ever. We believe that pilots who strive to develop an inquiring mind with a deep and abiding respect for the humilities afforded us in aviation have taken a major step toward the elimination of pilot error and poor judgement from our accident statistics.

MEMBER

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE:—"To foster aviation, as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in **research, development, and advancement of aviation**; to develop uniform laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."

P. O. Box 1698

Helena, Montana 59601



JULY, 1972

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